



Application No. 10/027,945

Attorney Docket No.: 27238.33
Customer No.: 27683

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	§	
Lee, Dalsu	§	
	§	
Serial No.: 10/027,945	§	Group Art Unit: 2676
	§	
Filed: December 20, 2001	§	Examiner: Caschera, Antonio A.
	§	
For: GENERIC APPLICATION FLOW	§	Confirmation No.: 2615
MANAGEMENT SYSTEM AND	§	
METHOD	§	

AFFIDAVIT UNDER 37 C.F.R. § 1.131

Commissioner For Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

I, Jean-Pierre Fortin, being duly sworn, depose and say:

1. I am an authorized signatory for Nortel Networks Limited ("Nortel"), the assignee of the entire interest of the above patent.
2. It was not possible to obtain an affidavit or declaration of the inventor at this time.
3. All acts described in this affidavit took place in the United States of America.
4. Prior to August 14, 2001, the invention claimed in the above-identified patent application was disclosed to Nortel's in-house patent attorneys, as evidenced by the invention disclosure form provided in Exhibit A.
5. On or about June 18, 2001, Nortel hired the law firm of Haynes and Boone to prepare the above-identified patent application. The inventor and Haynes and Boone then began preparation of the above-identified patent application.
6. On December 20, 2001, the patent application was filed with the U.S. Patent Office.
7. At no time were the activities regarding disclosure of the invention in the above-identified provisional patent application ever suspended. It was the constant and continuous intention of Nortel to diligently move towards disclosure of the invention by filing the above-identified patent application.

8. Based on the foregoing facts, I believe that the above-referenced invention was conceived prior to August 14, 2001 and that Nortel was diligent in preparing the patent application for filing on December, 20, 2001.

9. Furthermore, I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or document or any patent issuing therefrom.

FURTHER Applicant says not.

Signature: _____

Name: Jean-Pierre Fortin

The above signature was executed before me, a notary/magistrate/foreign official (circle one) duly authorized to administer oaths, before me on 16th of August, 2005 .

Name of notary, magistrate, or foreign official

Signature _____

Location _____

City of Ottawa

My Commission expires N/A

Invention Disclosure Submission Reply

COPY

Disc No:	14305ST	Received Date:	
Title: Building a generic application flow management system.			

KS

----- Inventors -----

Global ID	Name	Work Info	Home Info
0506303	HR Name: LEE, DALSU Known As: DALSU Email: Mgr First Name: Mgr Last Name: Mgr Global ID:	Location: Location Code: Dept: Phone: Ext Phone: Fax: Ext Fax: Mail Stop: Citizenship:	Address: Phone:

----- Attachments -----

<End of Attachments>

Were there additional inventors involved? no		Were there contractors involved? no	
Name of Supervisor or Divisional Head:		Name of I&D:	
SHELDON DAVIS		AL DELORENZI	
LOF:	EBUSINESS	Business Unit:	E-BUSINESS CTO
Completion Date:			
Has this invention been discussed with others? If so, please complete:			
Inside Nortel - Whom?	SHELDON DAVIS	Outside Nortel - Whom?	
Inside Nortel - When?	05 feb 2001	Outside Nortel - When?	
NDA? no			
Are you aware of any imminent future disclosures? Please provide dates and details:			
Keywords for Searching:		Products that will use this invention:	

Nortel Networks Confidential & Privileged Information

Does the invention arise from any arrangement involving a governmental organization?	no
Is the invention related to a Standard Activity?	Informational Data Object
no	

Technical Information

Background of the invention:

Some of our products require ways of dynamically creating applications during run time, for example Symposium Scripting to control the call flow, IVR GUI tools to create the IVR applications to control the IVR call flows etc. This invention provides a way of creating generic applications based upon Java(Bean) and XML during run time using GUI interface to create an application as a flow chart, save as a XML file, run the application described in the XML. Java provides reflection APIs to be used for finding classes, interfaces, objects to support an environment for development of debugger, class browsers, GUI builders. This invention uses this reflection API to look at the classes, interfaces to dynamically import the Java objects into the GUI based application builder and display as an icon, and then drag and drop to create an application as a flow chart. This flow chart can be saved as a XML file to describe which objects to be created, which methods to be called, which parameters to be passed, etc. The sever takes this XML file, parse it using XML parser, and then execute the application as described in the XML file.

Problem Solved by the invention:

The current methods/processes of creating dynamic applications does not support the generic objects. For example, ?QUEUE TO SKILLSET Skillset_A? script command for Symposium Call Center Server compiled into binary ?QueueToSkillset? Opcode and parameters, and then the execution application calls ?queueToSkillset()? method of ?CPCall? object. In this process, the script compiler(including parser) is very specific to execution application and objects, cannot be used for any other purposes, also very hard to understand and maintain(most of the people who understand how SCCS script compiler works left the company). This invention uses the Java(Bean), XML technology to support any Java Objects(for example, we can import any Java eBusiness Objects and then use them in the application flow without any coding). Also it is easy to understand and maintain, because it is using generic object model like class name, method name, etc and XML parser instead of using predefined application specific script commands, opcodes, parsers, and compilers.

Solution that have been tried and why they didn't work:

Please refer to the above

Specific elements or steps that solved the problem and how they do it:

For explanation, Java object ?Call? has ?giveRingBack(), ?giveMusic(int musicRoute)?. The builder does a look up and import into the visual interface and display as an icon. Later this ?Call? object can dragged and dropped into the flow chart, and then saved as a XML file. This will have lines like ?<object class= "Call"> <construct/><call name= "giveRingBack"/> <call name= "giveMusic"> <argument type= "Integer" value= "11"/></call>?. And then server takes this XML file, parse it using XML parser and then execute the application described in the XML file(create a ?Call? object, calls ?giveRingBack()? method, calls ?giveMusic(11)?). So this process eliminates the needs for proprietary predefined script command, binary opcodes, parser/compiler, execution engine. (A simple proof of concept prototype is available)

Commercial value of the invention to Nortel and Nortel's non-proprietary:

This invention can be used for the product that needs dynamic application development/deployment environment, and also can be used for any generic enterprise application integration.

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Invention Disclosure Submission Reply

Disc No:	14305ST	Received Date:	
Disc Title:	Building a generic application flow management system (real time automated workflow management)		

Technical Information
<p>Brief Description of the Invention:</p> <p>Some of our products require ways of dynamically creating applications during run time, for example Symposium Scripting to control the call flow, IVR GUI tools to create the IVR applications to control the IVR call flows etc. This invention provides a way of creating generic applications based upon Java(Bean) and XML during run time using GUI interface to create an application as a flow chart, save as a XML file, run the application described in the XML. Java provides reflection APIs to be used for finding classes, interfaces, objects to support an environment for development of debugger, class browsers, GUI builders. This invention uses this reflection API to look at the classes, interfaces to dynamically import the Java objects into the GUI based application builder and display as an icon, and then drag and drop to create an application as a flow chart. This flow chart can be saved as a XML file to describe which objects to be created, which methods to be called, which parameters to be passed, etc. The sever takes this XML file, parse it using XML parser, and then execute the application as described in the XML file. Also this invention can be used for any generic enterprise application integration as long as the enterprise application components are available, because this invention can support(import, display as an icon, drag and drop to create a flow chart, and then run on the server) any Java component objects.</p> <p>Problem Solved by the Invention:</p> <p>The current methods/processes of creating dynamic applications does not support the generic objects. For example, "QUEUE TO SKILLSET Skillset_A" script command for Symposium Call Center Server compiled into binary "QueueToSkillset" Opcode and parameters, and then the execution application calls "queueToSkillset()" method of "CPCall" object. In this process, the script compiler(including parser) is very specific to execution application and objects, cannot be used for any other purposes, also very hard to understand and maintain(most of the people who understand how SCCS script compiler works left the company). This invention uses the Java(Bean), XML technology to support any Java Objects(for example, we can import any Java eBusiness Objects and then use them in the application flow without any coding). Also it is easy to understand and maintain, because it is using generic object model like class name, method name, etc and XML parser instead of using predefined application specific script commands, opcodes, parsers, and compilers.</p> <p>Solutions that have been tried and why they did not work:</p> <p>Refer to the above</p> <p>Specific elements or steps that solve the problem and how they do it:</p> <p>For explanation, Java object "Call" has "giveRingBack()", "giveMusic(int musicRoute)" methods. The builder does a look up and import into the visual interface and display as an icon. Later this "Call" object can be dragged and dropped into the flow chart, and then saved as a XML file. This will have lines like "<object class= \"Call\"> <construct/><call name= \"giveRingBack\"/> <call name= \"giveMusic\"> <argument type= \"Integer\" value= \"11\"/></call>". And then server takes this XML file, parse it using XML parser and then execute the application described in the XML file(create a "Call" object, calls "giveRingBack()" method, calls "giveMusic(11)". So this process eliminates the needs for proprietary predefined script command, binary opcodes, parser/compiler, execution engine. And also the above process can support any Java objects, therefore, it can used as an integration hub for enterprise application integration.</p> <p>Commercial value of the invention to Nortel and Nortel's competitors:</p> <p>This invention can be used for the product that needs dynamic application development/deployment environment, and also can be used for any generic enterprise application integration as an integration hub.</p>

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